

PCT09

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/856,681

DATE: 09/13/2001
TIME: 17:40:26

Input Set : A:\Sequence.txt
Output Set: N:\CRF3\09132001\I856681.raw

Does Not Comply
Corrected Diskette Needed

3 <110> APPLICANT: Behl, Christian
4 Klostermann, Andreas
6 <120> TITLE OF INVENTION: Human semaphorin 6A-1 (SEMA6A-A), a gene involved
7 in neuronal development and regeneration mechanisms
8 during apoptosis, and its use as a potential drug target
10 <130> FILE REFERENCE: 48498-258443
12 <140> CURRENT APPLICATION NUMBER: 09/856,681
13 <141> CURRENT FILING DATE: 2001-05-22
15 <150> PRIOR APPLICATION NUMBER: PCT/EP99/09215
16 <151> PRIOR FILING DATE: 1999-11-26
18 <150> PRIOR APPLICATION NUMBER: 98122441.3
19 <151> PRIOR FILING DATE: 1998-11-26
21 <160> NUMBER OF SEQ ID NOS: 7
23 <170> SOFTWARE: PatentIn Ver. 2.1

run

ERRORED SEQUENCES

299 <210> SEQ ID NO: 2
300 <211> LENGTH: 1030
301 <212> TYPE: PRT
302 <213> ORGANISM: Homo sapiens
304 <400> SEQUENCE: 2
305 Met Arg Ser Glu Ala Leu Leu Leu Tyr Phe Thr Leu Leu His Phe Ala
306 1 5 10 15
307 Gly Ala Gly Phe Pro Glu Asp Ser Glu Pro Ile Ser Ile Ser His Gly
308 20 25 30
309 Asn Tyr Thr Lys Gln Tyr Pro Val Phe Val Gly His Lys Pro Gly Arg
310 35 40 45
311 Asn Thr Thr Gln Arg His Arg Leu Asp Ile Gln Met Ile Met Ile Met
312 50 55 60
313 Asn Gly Thr Leu Tyr Ile Ala Ala Arg Asp His Ile Tyr Thr Val Asp
314 65 70 75 80
315 Ile Asp Thr Ser His Thr Glu Glu Ile Tyr Cys Ser Lys Lys Leu Thr
316 85 90 95
317 Trp Lys Ser Arg Gln Ala Asp Val Asp Thr Cys Arg Met Lys Gly Lys
318 100 105 110
319 His Lys Asp Glu Cys His Asn Phe Ile Lys Val Leu Leu Lys Lys Asn
320 115 120 125
321 Asp Asp Ala Leu Phe Val Cys Gly Thr Asn Ala Phe Asn Pro Ser Cys
322 130 135 140
323 Arg Asn Tyr Lys Met Asp Thr Leu Glu Pro Phe Gly Asp Glu Phe Ser
324 145 150 155 160
325 Gly Met Ala Arg Cys Pro Tyr Asp Ala Lys His Ala Asn Val Ala Leu
326 165 170 175
327 Phe Ala Asp Gly Lys Leu Tyr Ser Ala Thr Val Thr Asp Phe Leu Ala
328 180 185 190
329

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/856,681

DATE: 09/13/2001
TIME: 17:40:26

Input Set : A:\Sequence.txt
Output Set: N:\CRF3\09132001\I856681.raw

341 Ile Asp Ala Val Ile Tyr Arg Ser Leu Gly Glu Ser Pro Thr Leu Arg
 342 195 200 205
 344 Thr Val Lys His Asp Ser Lys Trp Leu Lys Glu Pro Tyr Phe Val Gln
 345 210 215 220
 347 Ala Val Asp Tyr Gly Asp Tyr Ile Tyr Phe Phe Arg Glu Ile Ala
 348 225 230 235 240
 350 Val Glu Tyr Asn Thr Met Gly Lys Val Val Phe Pro Arg Val Ala Gln
 351 245 250 255
 353 Val Cys Lys Asn Asp Met Gly Gly Ser Gln Arg Val Leu Glu Lys Gln
 354 260 265 270
 356 Trp Thr Ser Phe Leu Lys Ala Arg Leu Asn Cys Ser Val Pro Gly Asp
 357 275 280 285
 359 Ser His Phe Tyr Phe Asn Ile Leu Gln Ala Val Thr Asp Val Ile Arg
 360 290 295 300
 362 Ile Asn Gly Arg Asp Val Val Leu Ala Thr Phe Ser Thr Pro Tyr Asn
 363 305 310 315 320
 365 Ser Ile Pro Gly Ser Ala Val Cys Ala Tyr Asp Met Leu Asp Ile Ala
 366 325 330 335
 368 Ser Val Phe Thr Gly Arg Phe Lys Glu Gln Lys Ser Pro Asp Ser Thr
 369 340 345 350
 371 Trp Thr Pro Val Pro Asp Glu Arg Val Pro Lys Pro Arg Pro Gly Cys
 372 355 360 365
 374 Cys Ala Gly Ser Ser Ser Leu Glu Arg Tyr Ala Thr Ser Asn Glu Phe
 375 370 375 380
 377 Pro Asp Asp Thr Leu Asn Phe Ile Lys Thr His Pro Leu Met Asp Glu
 378 385 390 395 400
 380 Ala Val Pro Ser Ile Phe Asn Arg Pro Trp Phe Leu Arg Thr Met Val
 381 405 410 415
 383 Arg Tyr Arg Leu Thr Lys Ile Ala Val Asp Thr Ala Ala Gly Pro Tyr
 384 420 425 430
 386 Gln Asn His Thr Val Val Phe Leu Gly Ser Glu Lys Gly Ile Ile Leu
 387 435 440 445
 389 Lys Phe Leu Ala Arg Ile Gly Asn Ser Gly Phe Leu Asn Asp Ser Leu
 390 450 455 460
 392 Phe Leu Glu Glu Met Ser Val Tyr Asn Ser Glu Lys Cys Ser Tyr Asp
 393 465 470 475 480
 395 Gly Val Glu Asp Lys Arg Ile Met Gly Met Gln Leu Asp Arg Ala Ser
 396 485 490 495
 398 Ser Ser Leu Tyr Val Ala Phe Ser Thr Cys Val Ile Lys Val Pro Leu
 399 500 505 510
 401 Gly Arg Cys Glu Arg His Gly Lys Cys Lys Lys Thr Cys Ile Ala Ser
 402 515 520 525
 404 Arg Asp Pro Tyr Cys Gly Trp Ile Lys Glu Gly Ala Cys Ser His
 405 530 535 540
 407 Leu Ser Pro Asn Ser Arg Leu Thr Phe Glu Gln Asp Ile Glu Arg Gly
 408 545 550 555 560
 410 Asn Thr Asp Gly Leu Gly Asp Cys His Asn Ser Phe Val Ala Leu Asn
 411 565 570 575
 413 Gly His Ser Ser Ser Leu Leu Pro Ser Thr Thr Ser Asp Ser Thr

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/856,681

DATE: 09/13/2001
TIME: 17:40:26

Input Set : A:\Sequence.txt
Output Set: N:\CRF3\09132001\I856681.raw

414	580	585	590
416	Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp Trp Lys His		
		600	605
417	595		
419	Leu Leu Asp Ser Pro Asp Ser Thr Asp Pro Leu Gly Ala Val Ser Ser		
		615	620
420	610		
422	His Asn His Gln Asp Lys Lys Gly Val Ile Arg Glu Ser Tyr Leu Lys		640
		630	635
423	625		
425	Gly His Asp Gln Leu Val Pro Val Thr Leu Leu Ala Ile Ala Val Ile		655
		645	650
426			
428	Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys		
		660	665
429			670
431	Val Cys Asp His Arg Arg Lys Asp Val Ala Val Val Gln Arg Lys Glu		
		675	680
432			685
434	Lys Glu Leu Thr His Ser Arg Arg Gly Ser Met Ser Ser Val Thr Lys		
		690	695
435			700
437	Leu Ser Gly Leu Phe Gly Asp Thr Gln Ser Lys Asp Pro Lys Pro Glu		720
		710	715
438	705		
440	Ala Ile Leu Thr Pro Leu Met His Asn Gly Lys Leu Ala Thr Pro Gly		
		725	730
441			735
443	Asn Thr Ala Lys Met Leu Ile Lys Ala Asp Gln His His Leu Asp Leu		
		740	745
444			750
446	Thr Ala Leu Pro Thr Pro Glu Ser Thr Pro Thr Leu Gln Gln Lys Arg		
		755	760
447			765
449	Lys Pro Ser Arg Gly Ser Arg Glu Trp Glu Arg Asn Gln Asn Leu Ile		
		770	775
450			780
452	Asn Ala Cys Thr Lys Asp Met Pro Pro Met Gly Ser Pro Val Ile Pro		800
		785	790
453			795
455	Thr Asp Leu Pro Leu Arg Ala Ser Pro Ser His Ile Pro Ser Val Val		
		805	810
456			815
458	Val Leu Pro Ile Thr Gln Gln Gly Tyr Gln His Glu Tyr Val Asp Gln		
		820	825
459			830
461	Pro Lys Met Ser Glu Val Ala Gln Met Ala Leu Glu Asp Gln Ala Ala		
		835	840
462			845
464	Thr Leu Glu Tyr Lys Thr Ile Lys Glu His Leu Ser Ser Lys Ser Pro		
		850	855
465			860
467	Asn His Gly Val Asn Leu Val Glu Asn Leu Asp Ser Leu Pro Pro Lys		
		865	870
468			875
471	Val Pro Gln Arg Glu Ala Ser Leu Gly Pro Pro Gly Ala Ser Leu Ser		880
		885	890
472			895
474	Gln Thr Gly Leu Ser Lys Arg Leu Glu Met His His Ser Ser Tyr		
		900	905
475			910
477	Gly Val Asp Tyr Lys Arg Ser Tyr Pro Thr Asn Ser Leu Thr Arg Ser		
		915	920
478			925
480	His Gln Ala Thr Thr Leu Lys Arg Asn Asn Thr Asn Ser Ser Asn Ser		
		930	935
481			940
483	Ser His Leu Ser Arg Asn Gln Ser Phe Gly Arg Gly Asp Asn Pro Pro		960
		945	950
484			955
486	Pro Ala Pro Gln Arg Val Asp Ser Ile Gln Val His Ser Ser Gln Pro		
		965	970
487			975

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/856,681

DATE: 09/13/2001
TIME: 17:40:26

Input Set : A:\Sequence.txt
Output Set: N:\CRF3\09132001\I856681.raw

489 Ser Gly Gln Ala Val Thr Val Ser Arg Gln Pro Ser Leu Asn Ala Tyr
490 980 985 990
492 Asn Ser Leu Thr Arg Ser Gly Leu Lys Arg Thr Pro Ser Leu Lys Pro
493 995 1000 1005
495 Asp Val Pro Pro Lys Pro Ser Phe Ala Pro Leu Ser Thr Ser Met Lys
496 1010 1015 1020
498 Pro Asn Asp Ala Cys Thr
E--> 499 025 1025 1030
880 <210> SEQ ID NO: 7
881 <211> LENGTH: 1030
882 <212> TYPE: PRT
883 <213> ORGANISM: Homo sapiens
885 <400> SEQUENCE: 7
886 Met Arg Ser Glu Ala Leu Leu Leu Tyr Phe Thr Leu Leu His Phe Ala
887 1 5 10 15
888 Gly Ala Gly Phe Pro Glu Asp Ser Glu Pro Ile Ser Ile Ser His Gly
889 20 25 30
890 892 Asn Tyr Thr Lys Gln Tyr Pro Val Phe Val Gly His Lys Pro Gly Arg
893 35 40 45
894 Asn Thr Gln Arg His Arg Leu Asp Ile Gln Met Ile Met Ile Met
895 50 55 60
896 898 Asn Gly Thr Leu Tyr Ile Ala Ala Arg Asp His Ile Tyr Thr Val Asp
897 65 70 75 80
899 901 Ile Asp Thr Ser His Thr Glu Glu Ile Tyr Cys Ser Lys Lys Leu Thr
900 85 90 95
902 904 Trp Lys Ser Arg Gln Ala Asp Val Asp Thr Cys Arg Met Lys Gly Lys
903 100 105 110
905 907 His Lys Asp Glu Cys His Asn Phe Ile Lys Val Leu Leu Lys Lys Asn
906 115 120 125
908 910 Asp Asp Ala Leu Phe Val Cys Gly Thr Asn Ala Phe Asn Pro Ser Cys
909 130 135 140
911 913 Arg Asn Tyr Lys Met Asp Thr Leu Glu Pro Phe Gly Asp Glu Phe Ser
912 145 150 155 160
914 916 Gly Met Ala Arg Cys Pro Tyr Asp Ala Lys His Ala Asn Val Ala Leu
915 165 170 175
917 919 Phe Ala Asp Gly Lys Leu Tyr Ser Ala Thr Val Thr Asp Phe Leu Ala
918 180 185 190
920 922 Ile Asp Ala Val Ile Tyr Arg Ser Leu Gly Glu Ser Pro Thr Leu Arg
921 195 200 205
923 925 Thr Val Lys His Asp Ser Lys Trp Leu Lys Glu Pro Tyr Phe Val Gln
924 210 215 220
926 928 Ala Val Asp Tyr Gly Asp Tyr Ile Tyr Phe Phe Arg Glu Ile Ala
927 225 230 235 240
929 931 Val Glu Tyr Asn Thr Met Gly Lys Val Val Phe Pro Arg Val Ala Gln
930 245 250 255
932 934 Val Cys Lys Asn Asp Met Gly Gly Ser Gln Arg Val Leu Glu Lys Gln
933 260 265 270
935 937 Trp Thr Ser Phe Leu Lys Ala Arg Leu Asn Cys Ser Val Pro Gly Asp
936 275 280 285
938

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/856,681

DATE: 09/13/2001
TIME: 17:40:26

Input Set : A:\Sequence.txt
Output Set: N:\CRF3\09132001\I856681.raw

941 Ser His Phe Tyr Phe Asn Ile Leu Gln Ala Val Thr Asp Val Ile Arg
 942 290 295 300
 944 Ile Asn Gly Arg Asp Val Val Leu Ala Thr Phe Ser Thr Pro Tyr Asn
 945 305 310 315 320
 947 Ser Ile Pro Gly Ser Ala Val Cys Ala Tyr Asp Met Leu Asp Ile Ala
 948 325 330 335
 950 Ser Val Phe Thr Gly Arg Phe Lys Glu Gln Lys Ser Pro Asp Ser Thr
 951 340 345 350
 953 Trp Thr Pro Val Pro Asp Glu Arg Val Pro Lys Pro Arg Pro Gly Cys
 954 355 360 365
 956 Cys Ala Gly Ser Ser Ser Leu Glu Arg Tyr Ala Thr Ser Asn Glu Phe
 957 370 375 380
 959 Pro Asp Asp Thr Leu Asn Phe Ile Lys Thr His Pro Leu Met Asp Glu
 960 385 390 395 400
 962 Ala Val Pro Ser Ile Phe Asn Arg Pro Trp Phe Leu Arg Thr Met Val
 963 405 410 415
 965 Arg Tyr Arg Leu Thr Lys Ile Ala Val Asp Thr Ala Ala Gly Pro Tyr
 966 420 425 430
 968 Gln Asn His Thr Val Val Phe Leu Gly Ser Glu Lys Gly Ile Ile Leu
 969 435 440 445
 971 Lys Phe Leu Ala Arg Ile Gly Asn Ser Gly Phe Leu Asn Asp Ser Leu
 972 450 455 460
 974 Phe Leu Glu Glu Met Ser Val Tyr Asn Ser Glu Lys Cys Ser Tyr Asp
 975 465 470 475 480
 977 Gly Val Glu Asp Lys Arg Ile Met Gly Met Gln Leu Asp Arg Ala Ser
 978 485 490 495
 980 Ser Ser Leu Tyr Val Ala Phe Ser Thr Cys Val Ile Lys Val Pro Leu
 981 500 505 510
 983 Gly Arg Cys Glu Arg His Gly Lys Cys Lys Lys Thr Cys Ile Ala Ser
 984 515 520 525
 986 Arg Asp Pro Tyr Cys Gly Trp Ile Lys Glu Gly Ala Cys Ser His
 987 530 535 540
 989 Leu Ser Pro Asn Ser Arg Leu Thr Phe Glu Gln Asp Ile Glu Arg Gly
 990 545 550 555 560
 992 Asn Thr Asp Gly Leu Gly Asp Cys His Asn Ser Phe Val Ala Leu Asn
 993 565 570 575
 995 Gly His Ser Ser Leu Leu Pro Ser Thr Thr Ser Asp Ser Thr
 996 580 585 590
 998 Ala Gln Glu Gly Tyr Glu Ser Arg Gly Gly Met Leu Asp Trp Lys His
 999 595 600 605
 1001 Leu Leu Asp Ser Pro Asp Ser Thr Asp Pro Leu Gly Ala Val Ser Ser
 1002 610 615 620
 1004 His Asn His Gln Asp Lys Lys Gly Val Ile Arg Glu Ser Tyr Leu Lys
 1005 625 630 635 640
 1007 Gly His Asp Gln Leu Val Pro Val Thr Leu Leu Ala Ile Ala Val Ile
 1008 645 650 655
 1010 Leu Ala Phe Val Met Gly Ala Val Phe Ser Gly Ile Thr Val Tyr Cys
 1011 660 665 670
 1013 Val Cys Asp His Arg Arg Lys Asp Val Ala Val Val Gln Arg Lys Glu

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/856,681

DATE: 09/13/2001
TIME: 17:40:26

Input Set : A:\Sequence.txt
Output Set: N:\CRF3\09132001\I856681.raw

1014	675	680	685
1016	Lys Glu Leu Thr His Ser Arg Arg Gly Ser Met Ser Ser Val Thr Lys		
1017	690	695	700
1019	Leu Ser Gly Leu Phe Gly Asp Thr Gln Ser Lys Asp Pro Lys Pro Glu		720
1020	705	710	715
1022	Ala Ile Leu Thr Pro Leu Met His Asn Gly Lys Leu Ala Thr Pro Gly		
1023	725	730	735
1025	Asn Thr Ala Lys Met Leu Ile Lys Ala Asp Gln His His Leu Asp Leu		
1026	740	745	750
1028	Thr Ala Leu Pro Thr Pro Glu Ser Thr Pro Thr Leu Gln Gln Lys Arg		
1029	755	760	765
1031	Lys Pro Ser Arg Gly Ser Arg Glu Trp Glu Arg Asn Gln Asn Leu Ile		
1032	770	775	780
1034	Asn Ala Cys Thr Lys Asp Met Pro Pro Met Gly Ser Pro Val Ile Pro		800
1035	785	790	795
1037	Thr Asp Leu Pro Leu Arg Ala Ser Pro Ser His Ile Pro Ser Val Val		
1038	805	810	815
1040	Val Leu Pro Ile Thr Gln Gln Gly Tyr Gln His Glu Tyr Val Asp Gln		
1041	820	825	830
1043	Pro Lys Met Ser Glu Val Ala Gln Met Ala Leu Glu Asp Gln Ala Ala		
1044	835	840	845
1046	Thr Leu Glu Tyr Lys Thr Ile Lys Glu His Leu Ser Ser Lys Ser Pro		
1047	850	855	860
1049	Asn His Gly Val Asn Leu Val Glu Asn Leu Asp Ser Leu Pro Pro Lys		
1050	865	870	875
1052	Val Pro Gln Arg Glu Ala Ser Leu Gly Pro Pro Gly Ala Ser Leu Ser		880
1053	885	890	895
1055	Gln Thr Gly Leu Ser Lys Arg Leu Glu Met His His Ser Ser Ser Tyr		
1056	900	905	910
1059	Gly Val Asp Tyr Lys Arg Ser Tyr Pro Thr Asn Ser Leu Thr Arg Ser		
1060	915	920	925
1062	His Gln Ala Thr Thr Leu Lys Arg Asn Asn Thr Asn Ser Ser Asn Ser		
1063	930	935	940
1065	Ser His Leu Ser Arg Asn Gln Ser Phe Gly Arg Gly Asp Asn Pro Pro		960
1066	945	950	955
1068	Pro Ala Pro Gln Arg Val Asp Ser Ile Gln Val His Ser Ser Gln Pro		975
1069	965	970	
1071	Ser Gly Gln Ala Val Thr Val Ser Arg Gln Pro Ser Leu Asn Ala Tyr		
1072	980	985	990
1074	Asn Ser Leu Thr Arg Ser Gly Leu Lys Arg Thr Pro Ser Leu Lys Pro		
1075	995	1000	1005
1077	Asp Val Pro Pro Lys Pro Ser Phe Ala Pro Leu Ser Thr Ser Met Lys		
1078	1010	1015	1020
1080	Pro Asn Asp Ala Cys Thr		
E--> 1081	025	1030	

1025

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/856,681

DATE: 09/13/2001
TIME: 17:40:27

Input Set : A:\Sequence.txt
Output Set: N:\CRF3\09132001\I856681.raw

L:499 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:1081 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:7